ECONOMIC REPORT TO THE GOVERNOR 2009

State of Utah
Jon M. Huntsman, Jr.
Governor

Energy Overview
Utah experienced a significant increase in crude oil and natural gas production in 2008; however, coal production declined due to unexpected mine closures. Production of coal and natural gas continued to satisfy demand, while crude oil production, despite its recent rebound, still accounted for only 38% of Utah's total petroleum product consumption. The natural gas price in 2008 peaked near record highs during the summer and then followed its normal annual downward trend into the fall. In contrast, crude oil prices peaked at record highs in July and abnormally crashed to a third of their peak values following a dramatic downturn in the U.S. and world economies which threatens to continue well into 2009.

Crude oil production in Utah increased a remarkable 63% over the past five years, but in order to keep up with demand, Utah had to import significant amounts of crude from other states and Canada. Production and consumption of natural gas and electricity increased to record highs in 2008, mostly attributable to new natural-gas-fired power plants. Despite coal production decreasing for the second straight year, coal consumption, mainly at Utah's five coal-burning power plants, remained steady.

The wellhead price of crude oil reached a record inflation-adjusted high of $90.57 per barrel in 2008 which translated into an inflation-adjusted record price for diesel and the second highest inflation-adjusted price for motor gasoline. Similarly, the wellhead price of natural gas increased 56% over 2007's value, while the price for home-heating natural gas decreased 3.5%. The 2008 average cost of electricity in Utah remained well below the national average, mainly due to reliance on Utah's low-cost coal-fired generation.

2008 Summary
Petroleum
Production. Crude oil production in Utah has seen a substantial resurgence over the past five years with the discovery of the Covenant field in central Utah and increased exploration and drilling in the Uinta Basin. Crude oil production increased to 21.3 million barrels in 2008, up 9.1% from 2007 and up 63% from 2003. Total crude oil imports decreased by 2.2 million barrels in 2008, giving room at Utah refineries for the increase of Utah production. Of particular note, imports from Canada decreased from 8.8 million barrels in 2007 to 7.5 million barrels in 2008, significantly less than the record 13.2 million barrels delivered in 2004. Refinery receipts, the amount of crude oil delivered to the refineries, decreased for the second straight year from a record high 55.1 million barrels of crude oil in 2006 to 54.0 million barrels in 2008. This slowdown seems to be related to high motor gasoline and diesel prices and the resulting decrease in demand.

Prices. U.S. crude oil prices were on a roller coaster ride in 2008, starting near $90 a barrel in January, hitting an all-time high of $147 in July, then collapsing to below $50 by the end of the year. The price of Utah crude oil rose and fell commensurately, ending at a 2008 average of $90.57 per barrel. This is 45% higher than in 2007, double the price seen in 2004, and more than seven times the average price of $12.52 recorded in 1998. Even when the effect of inflation is taken into account, the 2008 price of Utah crude oil is the highest in history, followed by 1981's inflation-adjusted price of $81.12 per barrel. This recent increase in crude oil price translated into a significant increase in motor gasoline and diesel prices. The average 2008 price of regular unleaded motor gasoline in Utah increased 21% to $3.33 per gallon, more than double the average price from 2003. It should be noted, however, that by the end of 2008, motor gasoline experienced a sudden collapse in price similar to crude prices, finishing the year at less than $2.00 a gallon. The value of Utah's crude oil reached $1.9 billion in 2008, a new all-time high in nominal dollars. When inflation is taken into account, 2008 ranks fourth in total crude value behind 1981, 1984, and 1985.

Consumption. Utah's refined product production decreased 3.1% in 2008 to 64.4 million barrels, after reaching a record high of 66.4 million barrels in 2007. Likewise, refined petroleum product imports from Wyoming via the Pioneer pipeline decreased 7.4% in 2008. These decreases most likely resulted from very high product prices and followed decreases in overall demand. In addition, the Holly refinery was taken offline for roughly one month during the summer of 2008 as improvements were made and capacity increased. Utah's total petroleum product consumption decreased by 1.8% in 2008 to 56.3 million barrels after reaching an all-time high in 2007 of 57.3 million barrels. Utah refineries exported 21.5 million barrels of petroleum products via pipeline to other states in 2008, down 5.9% from the year before. Utah exports could soon increase as a petroleum product pipeline from Salt Lake City to Las Vegas is in the planning stages.

Natural Gas
Production. Natural gas production in Utah has also seen a substantial surge in the past few years as drilling in the Uinta Basin has significantly increased. Utah produced a record-high 418 billion cubic feet of natural gas in 2008, 8.5% more than in 2007 and 46% more than in 2003. Marketed production and actual natural gas sales also reached record highs at 405 and 372 billion cubic feet, respectively. Roughly 19% of natural gas production was from coalbed methane wells, but this percentage is decreasing as numerous new conventional wells are drilled in the Uinta Basin and existing coalbed methane wells have declining production rates.

Prices. The average wellhead price for natural gas in Utah increased 56%, from $4.10 per thousand cubic feet in 2007 to $6.40 in 2008. Utah's price for natural gas peaked during the summer at over $10 per thousand cubic feet, but following its normal downward fourth quarter trend, dropped to around $4. The new Rockies Express Pipeline, which was completed

in the first quarter of 2008, enabled Rocky Mountain natural gas to reach markets in the eastern United States. This "connecting-of-markets" was one factor in Utah's natural gas price increase, matching higher prices in the east. This increase in wellhead price, however, has not yet translated into higher consumer prices. The average price of residential natural gas was $9.11 per thousand cubic feet in 2008, 3.5% lower than the 2007 price of $9.44. The value of Utah's marketed natural gas reached an all-time nominal and inflation-adjusted high of $2.6 billion in 2008.

Consumption. Natural gas consumption in Utah increased by 7.9% in 2008 to a record-high 223 billion cubic feet. Natural gas consumption at electric utilities rose 60% in the last two years to 46.2 billion cubic feet as two new natural gas power plants came online in late 2006. Natural gas consumed for power generation has increased ten-fold over the past 10 years as concerns over greenhouse gas emissions have utilities favoring the construction of gas-fired power plants to provide quick-start peaking capacity, as well as supplying more baseload capacity. Natural gas consumption in the residential sector also increased by 13% as Utah households consumed a record-high 68.4 billion cubic feet in 2008. Industrial use of natural gas increased by 6.7% in 2008 to 33.7 billion cubic feet, but is still well below peak industrial consumption of 45.5 billion cubic feet reached in 1998. Utah only consumes 53% of in-state production, making Utah a net exporter of natural gas.

Coal

Production. Utah coal production decreased 1.2% in 2008 to 24.0 million short tons. This decrease was the result of the unexpected closure of the Crandall Canyon mine, closure of the Aberdeen (Tower) mine over safety concerns, and less-than-expected production at the Bear Canyon mine due to financial difficulties. Lower production also led to a decrease in coal distribution, which totaled 23.6 million short tons in 2008 and resulted in a small increase in coal imports. Two newly proposed coal mines are in various stages of development: the Lila Canyon mine, located in the southern part of the Book Cliffs coal field, currently has a permit and development is underway; and the Coal Hollow mine, located in the Alton coal field in southern Utah's Kane County, is still in the permitting phase.

Prices. The average mine-mouth price for Utah coal increased to $26.87 per short ton in 2008 from $25.18 in 2007. Similarly, the spot price for coal in Utah has increased from about $30 per short ton in the beginning of 2008 to $73 at the end of the year. This dramatic upturn in the spot market may affect Utah's mine-mouth price; however, production from many mines is locked into long-term lower-priced contracts, thus lowering Utah's overall state average. The end-use price of coal at Utah electric utilities, which includes transportation costs, increased 2.3% to $31.30 per short ton in 2008. The value of coal produced in Utah totaled $645 million, a new record high in nominal dollars, but well below the inflation-adjusted high of $1.1 billion seen in 1982.

Consumption. Approximately 17.8 million short tons of coal were consumed in Utah in 2008, 95% of which was burned at electric utilities. Demand for coal in Utah has reached a plateau in recent years, averaging about 17 million tons a year for the past 10 years. This level of demand will continue into the foreseeable future as plans for new coal-burning power plants have been put on hold until carbon regulations are determined. Coke consumption in Utah ended in 2002 when Geneva Steel went out of business, and coal sales for industrial use, mostly cement and lime companies, have averaged 850,000 tons for the last five years. Although it imports some coal, Utah has always been a net exporter, with 8.6 million short tons of coal going to other states and countries in 2008—about the same as in 2007, but much lower than peak exports of 15.1 million short tons delivered in 1996.

Electricity

Production. Electricity generation in Utah increased to an all-time high of 46,360 gigawatthours (GWh) in 2008, up 6.1% from the year before. The vast majority, 81%, came from coal-burning power plants; however, electric generation from natural gas plants has increased its share of total generation to 16%, five times greater than just three years ago. Petroleum accounted for 0.1%, while renewable resources, mostly hydroelectric (1.7%) and geothermal (0.4%), provided 2.6% of Utah's total electric generation. Commercial-scale wind energy can now be included in Utah's electric generation portfolio as the state's first commercial wind farm came online in late 2008. This farm, at the mouth of Spanish Fork Canyon, consists of nine, 2.1-megawatt (MW) turbines, for a total capacity of 18.9 MW. In addition, construction is underway just north of Milford, Utah, for a 200-MW wind farm that will contain 97 2.1-MW turbines. Furthermore, Utah's third geothermal electric plant came online in late 2008 in the Escalante Valley, adding an additional 10 MW of capacity to Utah's electric generation mix, and plans exist for several more similar facilities.

Prices. Despite more rapid increases in fuel prices, electricity prices for all sectors in Utah increased only 1.8% in 2008. Utah's 2008 average electric rate of 6.5 cents per kilowatthour (kWh) for all sectors of the economy is 30% lower than the national average of 9.7 cents. This is due in part to Utah's relatively cheap and abundant coal, which supplies 81% of electricity generation in the state. The residential price of Utah's electricity increased 1.6% in 2008 to 8.3 cents per kWh but is also much lower than the national average of 11.2 cents per kWh.

Consumption. Electricity consumption in Utah increased 1.3% in 2008 to 28,120 GWh, a new record high. Since 1980, electricity consumption has averaged a 3.5% increase each year, mirroring Utah's population increase (2.3%) combined with the increasing rate of consumption per capita (1.2%). Residential and commercial demand stayed roughly the same as in 2007, while industrial demand increased 4.3%. Utah is a

net exporter of electricity, using only 61% of in-state electric generation.

Conclusion and Outlook for Utah Energy Production and Consumption. Despite recent increases in crude oil production, Utah will continue to be dependent on other states and Canada for crude oil and petroleum products as current Utah production meets only 38% of in-state demand. Conversely, Utah will produce much more natural gas than it consumes, allowing roughly half of total production to be exported out-of-state. Coal production, despite recent decreases, should continue at a steady pace, as demand remains stable, especially from the electric utility sector. Utah also produces more coal than it uses, allowing 34% of production to be shipped to other states. Electricity generation will continue to increase as new electric plants, most recently natural gas, wind, and geothermal, come online to meet demand that is increasing at an average rate of 3.5% per year.

Prices. Utah crude oil reached a new record-high nominal and inflation-adjusted price of $90.57 per barrel in 2008, but year-end prices dropped to below $50 per barrel and suggest a much lower average for 2009 as the U.S. faces a recession. The price of natural gas, while hitting near-record highs in the summer, followed its normal seasonal path, averaging $6.40 per thousand cubic feet for 2008 and dropping to near $4.00 by year end. On the other hand, the spot price for Utah coal reached a record $73 per ton in late 2008, suggesting that the Utah coal price in 2009 may continue its upward trend. With regard to electricity, the abundance of established Utah coal-fired power plants will assure affordable, reliable electric power in Utah for the foreseeable future and will help keep Utah's electricity prices well below the national average.

Minerals Overview

The gross production value (in inflation-adjusted dollars) of all energy and mineral commodities produced in Utah in 2008 totaled a record $9.43 billion, about $1.82 billion more than the previous high of $7.61 billion established in 2006. The 2008 value is mostly due to increased precious metal and industrial mineral values and increased crude oil and natural gas prices and production. The decline of both oil and gas and nonfuel mineral prices that began in mid-2008 will have a significant negative impact on total mineral values in 2009.

The Utah Geological Survey (UGS) estimates the nominal value of mineral production (excluding oil and gas) in Utah was $4.89 billion in 2008. This is approximately $210 million (4.5%) higher than the revised $4.68 billion for 2007. The U.S. Geological Survey (USGS) ranked Utah fourth among all states in the value of nonfuel mineral production for 2007 with an estimated value of $3.94 billion

2008 Summary

The UGS estimated value of Utah's mineral production (excluding crude oil and natural gas) in 2008 reached a record-high $4.89 billion, an increase of about $210 million (4.5%) from 2007. Contributions from each of the major industry sectors for 2008 are as follows:

Base metals	$2.79 billion (57% of total)
Industrial minerals	$1.03 billion (21% of total)
Energy minerals	$671 million (14% of total)
Precious metals	$395 million (8% of total)

Base Metals

Base metal production, valued at approximately $2.79 billion, was the largest contributor to the value of minerals produced in 2008, accounting for 57% of the total value of minerals produced. Base metal values decreased approximately $32 million (1.2%) in 2008, due primarily to the lower production of copper and molybdenum. The decline in value was partially offset by substantial price increases for magnesium and vanadium. In descending order of value, base metal mines produced copper, molybdenum, magnesium, iron, and beryllium. Vanadium is a by-product in milling uranium. These metals were produced by Kennecott Utah Copper Company (copper and molybdenum) from one mine in Salt Lake County, Lisbon Valley Mining Company (copper) from a relatively new mine in San Juan County, US Magnesium, LLC (magnesium) from its electrolytic facility in Tooele County using brines from the Great Salt Lake, Palladon Iron Company (iron) from one mine in Iron County, and Brush Resources, Inc. (beryllium) from one mine in Millard County. Denison Mines recovers vanadium from two mines in San Juan County.

Industrial Minerals

Industrial minerals production (including sand and gravel), valued at a record $1.03 billion, was the second-largest contributor to the value of minerals produced in 2008 and accounted for approximately 21% of the total value of minerals produced (up from 18% in 2007). Utah's industrial mineral value exceeded one billion dollars for the first time in 2008. In contrast to the relatively few (six) Large Mines and facilities that produce base and precious metals, approximately 45 active Large Mines and brine-processing facilities and 40 Small Mines produced a myriad of industrial mineral commodities and products in 2008. The total of 85 Large and Small Mines does not include the more than 120 sand and gravel operations spread throughout the state that are exempt from Utah reclamation rules. The estimated value of industrial minerals increased approximately $110 million (12%) compared to 2007, due primarily to increased values of potash and phosphate. Because of the regional downturn in construction activity, the production of sand and gravel, crushed stone, and gypsum was significantly lower in 2008 compared to 2007.

The five most valuable commodities or groups of commodities produced, in descending order of value, were 1) salines, including salt, potash (potassium chloride), sulfate of potash (potassium sulfate), and magnesium chloride; 2) construction sand and gravel and crushed stone; 3) Portland cement; 4) lime, including quicklime and hydrated lime; and 5) phosphate. Together, these commodities contributed 91% of the total value of industrial minerals produced in Utah in 2008. The substantial increase in potash and phosphate prices was primarily responsible for the increase in saline values and in establishing a new record for industrial mineral values.

Energy Minerals

The value of energy minerals (coal and uranium) totaled approximately $671 million and was the third-largest contributor to the value of minerals produced in 2008, accounting for approximately 14% of the total value of minerals produced (up from 13% in 2007). The 2008 value is an increase of $59 million (10%) compared to 2007. Approximately 24 million tons of high-Btu, low-sulfur coal, valued at $645 million, were produced from nine mines operated by seven companies. More than 300,000 pounds of U3O8 (yellow cake), valued at approximately $26 million, were produced from three mines operated by one company in 2008. The coal mines are located in Carbon, Emery, and Sevier Counties and the uranium mines are located in Garfield and San Juan Counties. The value of coal increased about $33 million (5.4%) due to increased prices, while coal production was about 300,000 tons less than the 24.3 million tons produced in 2007. Coal prices, which have been steadily rising for the past three years, increased again in 2008 and are forecast to increase yet again in 2009. No new coal mines opened during the year, although several new mines are being planned and one new mine was permitted for development. The first year that uranium production values have been reported since 1997 was 2008. The restart of the uranium mines is largely the result of a three-fold increase in yellow cake prices that peaked in 2007. Spot uranium prices declined about 50% in 2008, resulting in one mine closure. This price drop may delay or preclude the planned opening of several mines and the restart of the Ticaboo uranium mill.

Precious Metals

Precious metals were valued at $395 million in 2008 and accounted for approximately 8% of the total value of minerals produced in Utah. The value of precious metal production was attributed to gold (87%) and silver (13%). Precious metal values increased $73 million (23%) compared to 2007 due to higher average prices of both gold and silver (33% and 12%, respectively). The two main producers of precious metals were Kennecott's Bingham Canyon mine, which recovers both silver and gold as by-products of copper production, and Kennecott's Barneys Canyon mine, which is a primary gold producer. The Bingham Canyon and Barneys Canyon mines are located in western Salt Lake County. Because of relatively high gold prices, the Barneys Canyon mine, which was expected to close its leach pad in 2008, will continue to operate into 2009.

Active Mines and New Mine Permits

As of mid-October 2008, the Division of Oil, Gas, and Mining (DOGM) listed 112 active Large Mines and 206 active Small Mines (excluding sand and gravel). In 2007 (DOGM has not yet received production reports for 2008), 62 Large Mines and 53 Small Mines reported production, compared to 68 Large Mines and 52 Small Mines in 2006. The Large Mines reporting production in 2007, grouped by industry sector, were industrial minerals (45), base metals (four), precious metals (one), and energy minerals (12), including nine coal and three uranium. The Small Mines reporting production in 2007, grouped by industry sector, were industrial minerals (40), base metals (one), and gemstones, fossils, and other (12).

Through mid-October 2008, DOGM received three new Large Mine permit applications and 33 new Small Mine permit applications. These numbers represent a decrease of seven Large Mine permit applications and an increase of one Small Mine permit application compared to 2007. Two of the new Large Mine applications were for industrial mineral operations and one was for precious metals. New Small Mine applications included 20 for industrial minerals, three for precious metals, eight for energy minerals, and one each for base metals, and gemstones, fossils, and other.

The number of Notices of Intent (NOI) to explore on public lands increased modestly in 2008. Thirty-nine NOIs were filed with DOGM through mid-October 2008, compared to 37 for all of 2007, and 35 for 2006. The 2008 NOIs included 19 for energy minerals (17 uranium and two oil shale), six for precious metals, and two for gemstones, fossils, and other.

Nonfuel Mineral Production Trends

According to preliminary data from the USGS, the value of Utah's nonfuel mineral production in 2007 was $3.94 billion, a slight decrease (less than 1%) from the $3.96 billion of 2006. This is the first decline in nonfuel mineral values since 2002. Nationally, Utah ranked fourth in 2007 (same as in 2005 and 2006) in the value of nonfuel mineral production, accounting for approximately 5.8% of the U.S. total. USGS data show that during the period from 1998 through 2007, the value of nonfuel mineral production in Utah ranged from a low of $1.24 billion in 2002 to a revised high of $3.96 billion in 2006. The UGS estimates the value of nonfuel mineral production in Utah for 2008 was $4.22 billion, 3.7% higher than the revised nonfuel mineral production estimate of $4.07 billion for 2007.

During the past four years, substantial increases in metal and mineral commodity prices and increased metals and industrial mineral production led to higher nonfuel mineral values. Most mineral prices peaked in mid-2008 but on average still ended the year higher than 2007. Because of the worldwide

economic downturn, which accelerated in the fourth quarter of 2008, mineral prices and the overall demand for nonfuel minerals will decline, perhaps significantly, in 2009.

Significant Issues Affecting Utah's Mining Industry

Significant short-term issues that will impact the mineral industry in Utah include the availability of money to fund exploration and development of new mineral resources, conflicts in commodity leasing (for example, oil and gas vs. potash), permitting delays, and the decreased incentive to explore for metal and mineral commodities in a declining price environment. Long-term issues include the change in rural Utah from a resource-based to a tourism-based economy that will continue to have a significant long-range impact on the availability of lands open for exploration and the willingness of the public to accept mineral development in areas they consider environmentally sensitive.

2009 Outlook

The overall value of mineral production in Utah for 2009 is expected to be lower than the 2008 value as mineral prices, which fell precipitously in the fourth quarter of 2008, will likely remain relatively low or continue to decline as the economic recession continues into 2009. Base and precious metal production should increase, while metal prices will be moderately to significantly lower. Industrial mineral production is expected to decrease moderately, while individual commodity prices (increases or decreases) could vary widely. Industrial minerals that are consumed both locally and regionally will be adversely affected as housing, industrial, and commercial construction continues to decline. Energy mineral values should increase as uranium production increases. Coal production is projected to remain flat, but coal prices should increase incrementally in 2009. Several new coal mines are being planned and one new mine was permitted for development. One relatively new copper mine (Lisbon Valley) converted to a leach only operation in 2008 and will produce at a much lower rate in 2009. The ramp-up in production of the recently reopened Iron Bull iron mine and increased vanadium production will make a modest contribution to base metal values that will offset some of the losses from falling copper and molybdenum prices.

The relatively high price of uranium that averaged about $100/pound in 2007 (versus a low of about $8/pound in 2000-2001) has rejuvenated uranium exploration and development activity in the Colorado Plateau province of southeastern Utah. Two mines produced a small amount of uranium in 2007 and three mines produced uranium in 2008. The decline in spot uranium prices from $90 per pound in January 2008 to $55 in December may delay plans to open several other uranium mines and the Shootaring Canyon mill near Ticaboo. However, increased interest in tar sand and oil shale may eventually lead to a significant expansion of Utah's energy mineral production within the next 10 to 15 years.

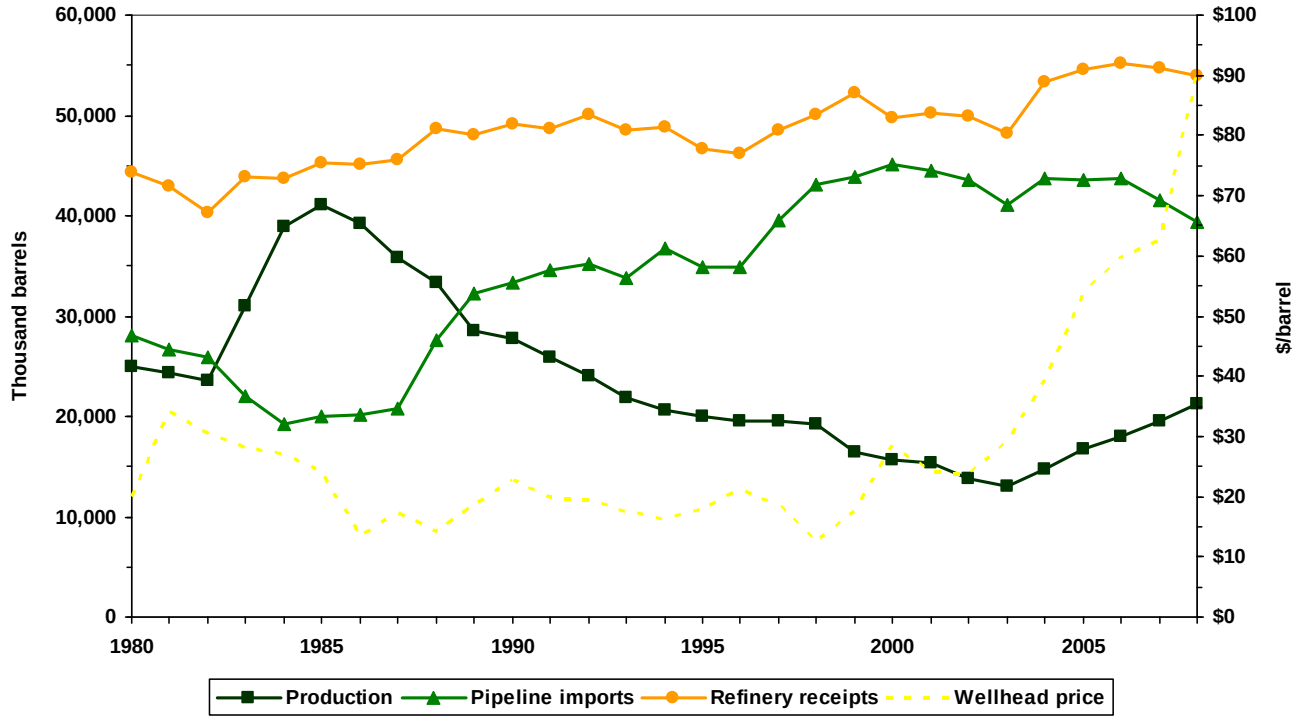
The number of exploration NOIs approved so far in 2008 is relatively high, and the UGS anticipates that the increase in uranium production and relatively high metal prices will continue to have a positive effect on exploration in the long term, although the recent downturn in metal prices could slow exploration efforts for the next one to two years.

Conclusions

The value of Utah's nonfuel mineral and energy production reached a record high in 2008 because of 1) increased base metal production and relatively high base metal prices, 2) significantly higher precious metal prices that more than offset slightly lower production, 3) record high industrial mineral values and production levels aided by substantial potash and phosphate price increases, 4) increased coal prices despite lower coal production, 5) increased uranium production, and 6) increased crude oil and natural gas production and prices. Although the number of producing mines statewide appears to be decreasing over the long term, the overall level of mineral exploration increased during 2007 and 2008 to levels not seen since the early 1990s; this increased exploration may eventually result in an increase in producing mines.

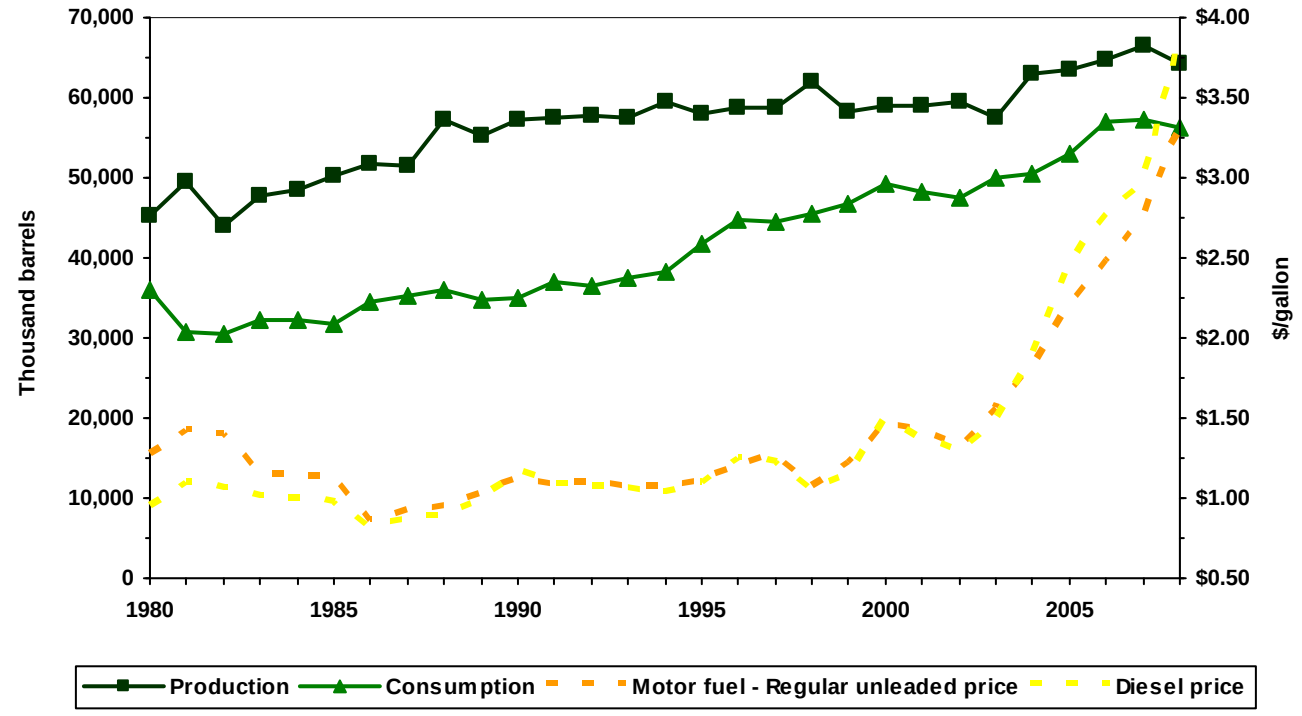
The UGS anticipates that Utah's nonfuel mineral valuation will be moderately lower in 2009, primarily due to a decline in precious and base metal prices and lower industrial mineral production and prices, despite projected increases in base and precious metal and uranium production. Coal prices have increased each year beginning in 2005 and are projected to increase again in 2009. Utah ranked fourth in the nation in the value of nonfuel mineral production and 13th in coal production in 2007. The nonfuel ranking will likely not change for 2008. The resurgence of uranium exploration and the reopening of several mines will add to the value of the energy minerals sector of the industry, and tar sand and oil shale development may add significantly to energy mineral values in the future.

Figure 79
Utah's Crude Oil Production, Pipeline Imports, and Refinery Receipts Plotted with Wellhead Price



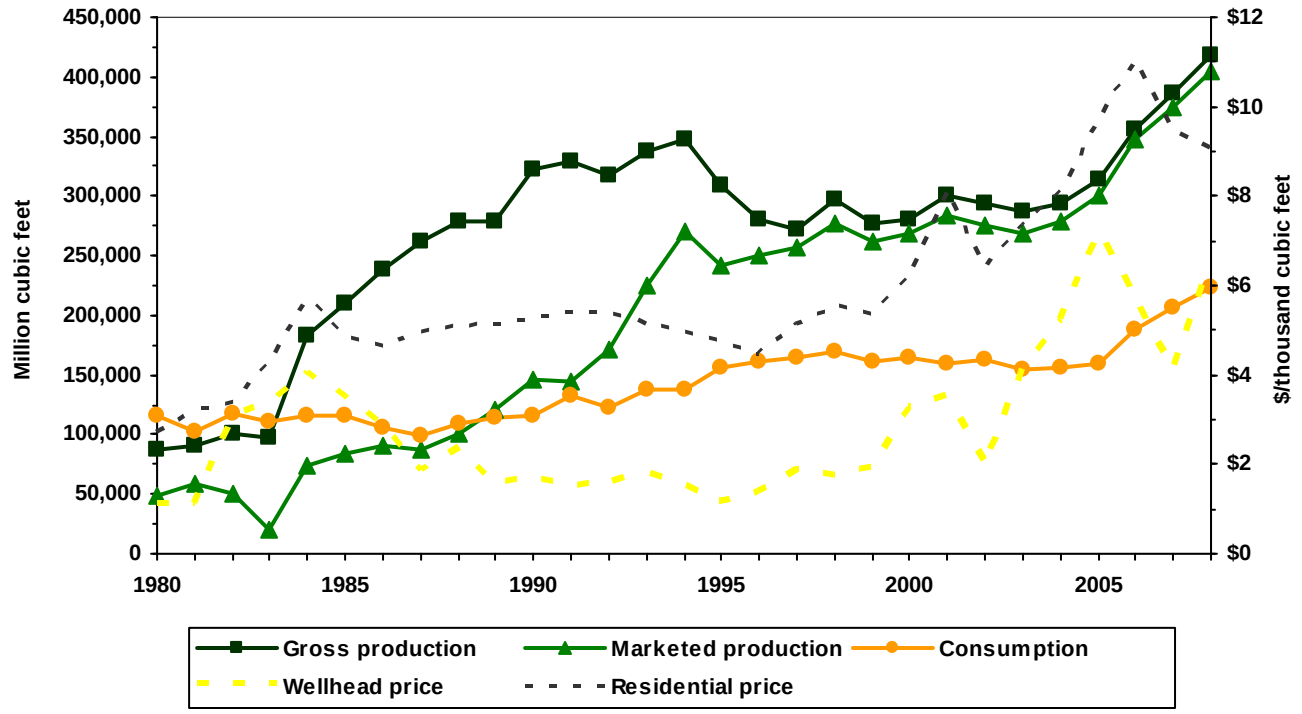
Source: Utah Geological Survey; Utah Division of Oil, Gas and Mining; U.S. Energy Information Administration

Figure 80
Utah's Petroleum Product Production and Consumption Plotted with Motor Gasoline and Diesel Prices



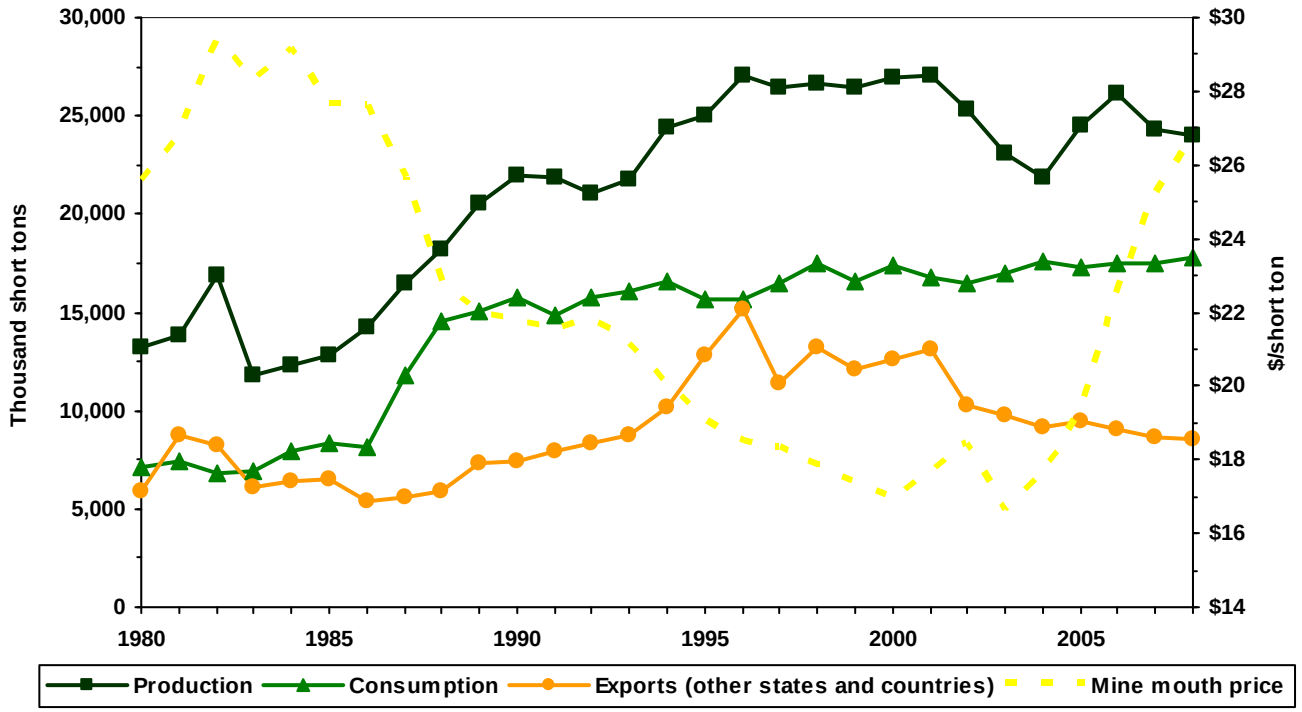
Source: Utah Geological Survey; U.S. Energy Information Administration

Figure 81
Utah's Natural Gas Production and Consumption Plotted with Wellhead and Residential Prices



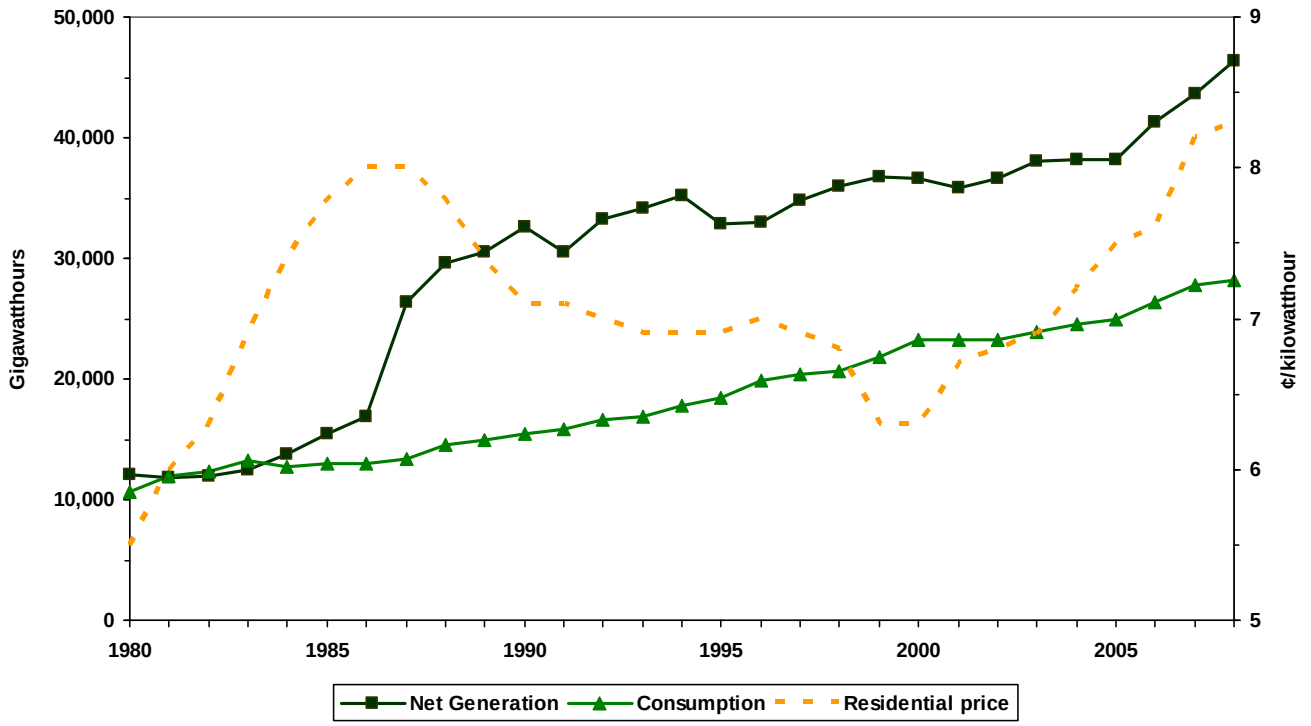
Source: Utah Geological Survey; Utah Division of Oil, Gas and Mining; U.S. Energy Information Administration

Figure 82
Utah's Coal Production, Consumption, and Exports Plotted with Mine Mouth Price



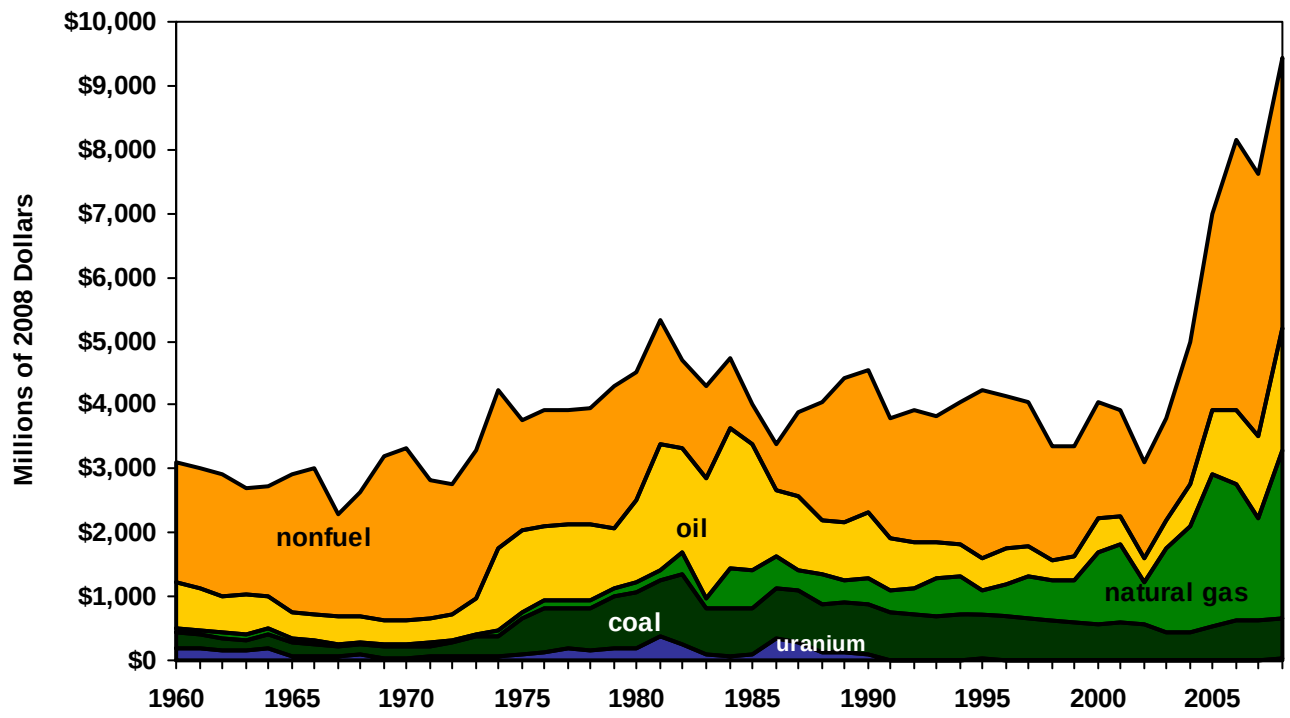
Source: Utah Geological Survey; U.S. Energy Information Administration

Figure 83
Utah's Electricity Net Generation and Consumption Plotted with End-Use Residential Prices



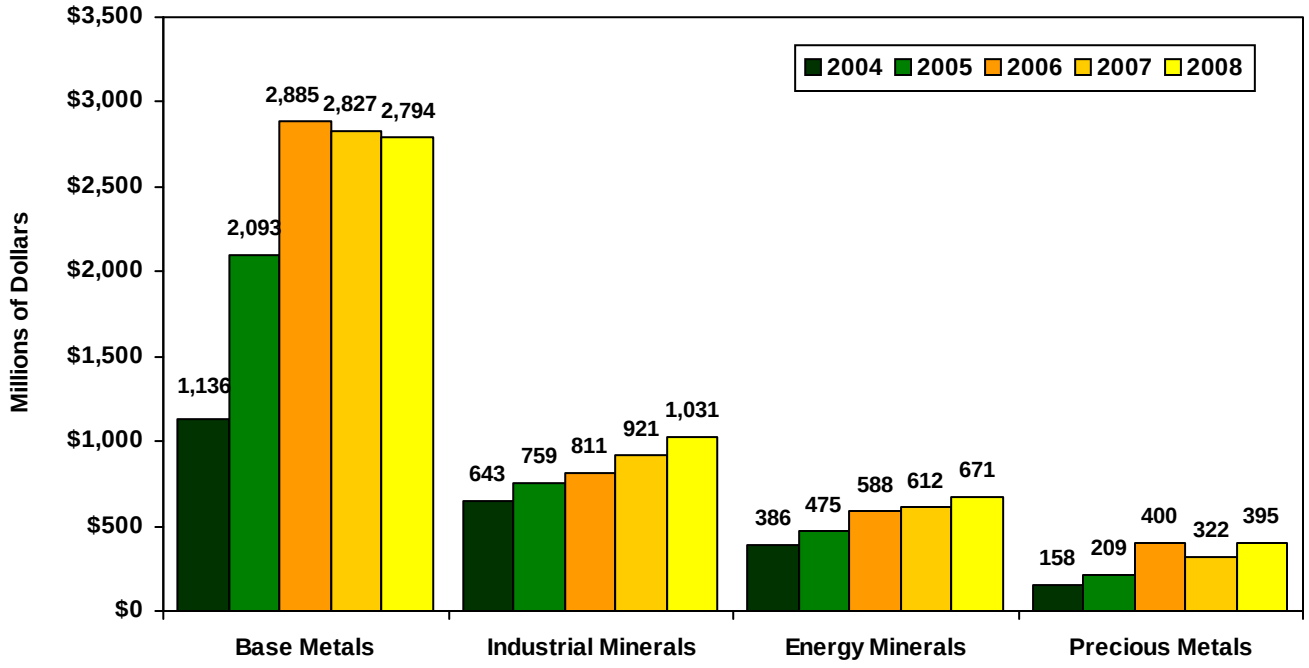
Source: Utah Geological Survey; U.S. Energy Information Administration

Figure 84
Total Annual Value of Utah's Energy and Mineral Production, Inflation Adjusted to 2008 Dollars



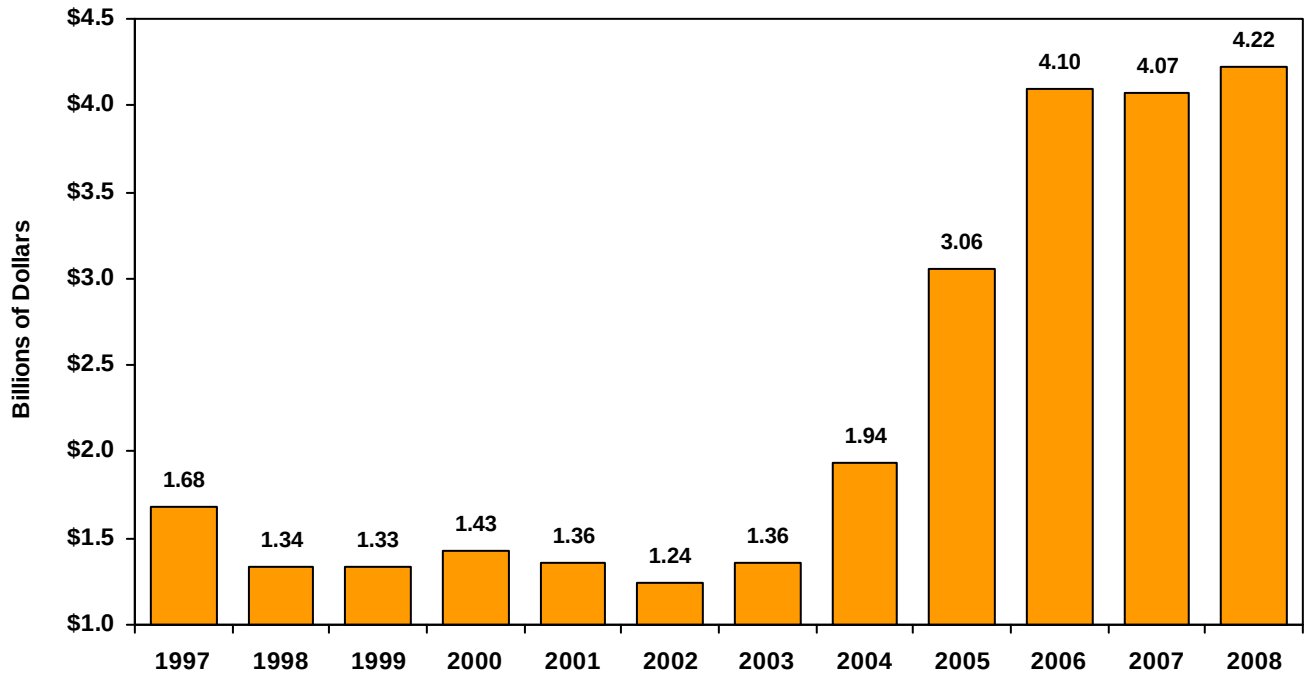
Source: Utah Geological Survey

Figure 85
Value of Utah's Annual Mineral Production in Nominal Dollars



Note: Energy minerals are coal and uranium
Source: Utah Geological Survey

Figure 86
Total Annual Value of Utah's Nonfuel Mineral Production



Source: U.S. Geological Survey

Table 88
Supply, Disposition, Price, and Value of Crude Oil in Utah

	Supply*				Disposition				Prices	Value
Year	Utah Field Production	Colorado Imports	Wyoming Imports	Canadian Imports	Utah Crude Exports**	Refinery Receipts	Refinery Inputs	Refinery Beginning Stocks	Wellhead	Value of Utah Crude Oil
	Thousand barrels				Thousand barrels				$/barrel	Million $
1980	24,979	15,846	12,233	0	8,232	44,291	44,421	665	$19.79	$494.3
1981	24,309	14,931	11,724	0	7,866	42,876	43,007	762	34.14	829.9
1982	23,595	13,911	12,033	0	7,826	40,372	40,368	593	30.50	719.7
1983	31,045	14,696	7,283	0	8,316	43,901	43,844	632	28.12	873.0
1984	38,965	13,045	6,195	0	13,616	43,745	43,544	606	27.21	1,060.2
1985	41,080	13,107	6,827	0	14,597	45,224	45,357	695	23.98	985.1
1986	39,243	12,567	7,574	0	15,721	45,086	45,034	559	13.33	523.1
1987	35,829	13,246	7,454	0	12,137	45,654	45,668	613	17.22	617.0
1988	33,365	12,783	14,739	0	8,411	48,690	48,604	599	14.24	475.1
1989	28,504	13,861	18,380	0	6,179	47,989	47,948	626	18.63	531.0
1990	27,705	14,494	18,844	0	7,725	49,104	48,977	656	22.61	626.4
1991	25,928	14,423	20,113	0	8,961	48,647	48,852	749	19.99	518.3
1992	24,074	13,262	21,949	0	6,901	50,079	49,776	513	19.39	466.8
1993	21,826	11,575	22,279	0	7,123	48,554	48,307	645	17.48	381.5
1994	20,668	10,480	26,227	0	6,913	48,802	48,486	691	16.38	338.5
1995	19,976	9,929	24,923	60	6,754	46,641	46,634	806	17.71	353.8
1996	19,529	9,857	24,297	783	6,862	46,126	46,265	768	21.10	412.1
1997	19,593	8,565	28,162	2,858	7,105	48,492	48,477	633	18.57	363.8
1998	19,218	8,161	28,779	6,097	7,445	50,017	49,476	613	12.52	240.6
1999	16,362	7,335	28,461	8,067	6,905	52,271	50,556	704	17.69	289.4
2000	15,609	7,163	26,367	11,528	6,350	49,716	49,999	786	28.53	445.3
2001	15,274	7,208	25,100	12,188	5,637	50,310	50,143	457	24.09	367.9
2002	13,771	7,141	25,455	10,966	5,312	49,962	49,987	591	23.87	328.7
2003	13,097	6,964	24,152	9,966	4,654	48,267	48,284	547	28.88	378.3
2004	14,745	7,559	22,911	13,206	4,222	53,400	53,180	532	39.35	580.2
2005	16,676	8,214	24,372	11,055	4,064	54,513	54,544	767	53.98	900.2
2006	17,928	9,355	23,256	11,109	3,889	55,119	55,192	728	59.70	1,070.3
2007	19,538	10,708	22,012	8,801	4,074	54,764	54,952	662	62.48	1,220.7
2008e	21,300	10,150	21,700	7,460	4,090	53,990	53,600	473	90.57	1,929.1

e = estimate
*Out-of-state imports only include pipeline shipments; minor imports may arrive by truck. Also, there may be additional minor imports from other states.
**Estimated

Note: Prices and values are in nominal dollars

Source: Utah Geological Survey; Utah Division of Oil, Gas and Mining; U.S. Energy Information Administration

Table 89
Supply, Disposition, and Select Prices of Petroleum Products in Utah

	Supply			Consumption by Product					Exports	Prices	
Year	Refined in Utah	Refinery Beginning Stocks	Refined Product Pipeline Imports*	Motor Gasoline	Jet Fuel	Distillate Fuel	All Other	Total	Pipeline Exports to Other States*	Motor Fuel - Regular Unleaded	Diesel
	Thousand barrels			Thousand barrels					Thousand barrels	$/gallon	
1980	45,340	3,202	6,427	15,534	2,637	8,401	9,411	35,983	22,136	$1.27	$0.95
1981	49,622	3,376	7,401	15,548	2,424	7,098	5,742	30,812	23,630	1.42	1.10
1982	44,011	2,979	8,933	15,793	2,801	6,438	5,531	30,563	22,119	1.40	1.06
1983	47,663	3,153	6,943	15,954	3,284	6,387	6,691	32,316	25,298	1.16	1.01
1984	48,493	2,842	8,215	16,151	3,413	6,107	6,458	32,129	24,121	1.14	1.00
1985	50,188	2,989	8,030	16,240	3,808	5,715	6,046	31,809	23,365	1.14	0.97
1986	51,822	2,803	8,766	17,541	4,335	6,978	5,552	34,406	20,027	0.86	0.82
1987	51,519	2,661	8,695	17,623	4,969	6,507	6,073	35,172	20,359	0.92	0.88
1988	57,354	2,306	8,926	18,148	4,977	7,060	5,786	35,971	22,031	0.95	0.89
1989	55,184	2,685	9,550	17,311	5,095	5,917	6,371	34,694	21,409	1.02	0.99
1990	57,349	3,000	10,647	16,724	5,281	7,162	5,915	35,082	21,419	1.12	1.17
1991	57,446	2,758	11,459	17,395	5,917	7,038	6,583	36,933	21,918	1.09	1.09
1992	57,786	2,746	10,534	17,905	5,607	7,286	5,726	36,524	21,087	1.10	1.07
1993	57,503	2,840	10,707	18,837	5,518	7,422	5,645	37,422	19,539	1.07	1.06
1994	59,458	3,173	11,555	19,433	5,270	7,653	5,919	38,275	21,326	1.07	1.04
1995	57,974	2,907	12,289	20,771	5,658	8,469	6,820	41,718	20,512	1.10	1.10
1996	58,852	3,253	12,692	21,170	6,303	8,746	8,409	44,628	20,512	1.21	1.25
1997	58,677	2,640	12,949	22,024	6,277	9,976	6,249	44,526	22,444	1.26	1.23
1998	62,012	2,908	12,842	22,735	6,373	10,398	5,940	45,446	22,474	1.08	1.05
1999	58,201	2,780	14,509	23,141	7,443	9,793	6,429	46,806	22,887	1.22	1.15
2000	59,125	2,426	14,568	23,895	7,701	10,629	6,954	49,179	22,811	1.48	1.50
2001	59,094	2,306	15,764	22,993	6,880	11,236	7,058	48,167	23,937	1.41	1.37
2002	59,514	2,739	16,848	24,158	6,416	11,482	5,551	47,607	24,082	1.32	1.29
2003	57,511	2,846	16,515	24,325	6,758	11,731	7,083	49,897	22,729	1.56	1.50
2004	63,071	2,599	18,486	24,744	7,137	12,264	6,480	50,625	24,475	1.82	1.88
2005	63,487	2,806	20,258	24,677	7,394	13,717	7,190	52,978	24,482	2.21	2.48
2006	64,806	2,587	18,976	25,312	7,560	17,292	6,903	57,067	23,321	2.49	2.77
2007**	66,443	2,924	15,991	26,071	7,300	17,000	6,890	57,261	22,851	2.76	2.99
2008e	64,360	2,513	14,800	25,550	7,400	16,500	6,800	56,250	21,500	3.33	3.86

e = estimate
*Amounts shipped by truck are unknown
**Consumption is estimated

Note: Prices are in nominal dollars

Source: Utah Geological Survey, U.S. Energy Information Administration

Table 90
Supply, Disposition, Prices, and Value of Natural Gas in Utah

	Supply			Consumption by End Use								Prices					Value
Year	Gross Production	Marketed Production	Actual Sales	Residential	Commercial	Vehicle Fuel	Industrial	Electric Utilities	Lease & Plant	Pipeline	Total	Wellhead	End-Use Residential	End-Use Commercial	End-Use Industrial	End-Use Electric Utilities	Value of Marketed Production
	Million cubic feet			Million cubic feet								$/thousand cubic feet					Million $
1980	87,766	47,857	na	45,735	12,234	0	43,545	5,133	7,594	851	115,092	$1.12	$2.74	$5.59	$2.26	$1.91	$53.6
1981	90,936	59,120	na	43,497	11,635	0	42,779	3,097	511	721	102,240	1.10	3.23	5.35	2.58	2.13	65.0
1982	100,628	49,995	na	53,482	14,306	0	39,804	3,023	5,965	1,126	117,706	3.06	3.41	3.43	2.45	2.29	153.0
1983	96,933	20,925	na	49,645	13,279	0	40,246	1,259	4,538	1,218	110,185	3.40	4.26	4.32	3.15	2.95	71.1
1984	183,062	74,698	na	49,869	13,339	0	42,709	271	8,375	1,015	115,578	4.08	5.68	4.96	3.52	3.74	304.8
1985	210,267	83,405	na	53,043	14,189	0	37,448	235	9,001	1,201	115,117	3.52	4.86	4.91	3.23	4.11	293.6
1986	239,259	90,013	na	49,144	13,146	0	28,264	230	13,289	1,102	105,175	2.90	4.64	4.73	3.00	3.66	261.0
1987	262,084	87,158	na	41,536	14,811	0	23,884	263	17,671	822	98,987	1.88	4.97	4.98	3.20	5.47	163.9
1988	278,578	101,372	na	42,241	17,911	0	30,354	196	16,889	1,362	108,953	2.39	5.11	4.08	3.10	3.05	242.3
1989	278,321	120,089	na	45,168	16,522	0	33,963	636	16,211	1,037	113,537	1.58	5.14	4.16	3.30	3.38	189.7
1990	323,028	145,875	63,336	43,424	16,220	1	35,502	907	19,719	875	116,648	1.70	5.28	4.30	3.62	5.04	248.0
1991	329,464	144,817	65,288	50,572	19,276	6	43,120	5,190	13,738	864	132,766	1.54	5.44	4.50	3.69	1.72	223.0
1992	317,763	171,293	94,725	44,701	16,584	150	40,878	6,576	12,611	1,284	122,785	1.63	5.44	4.40	3.91	1.87	279.2
1993	338,276	225,401	137,864	51,779	22,588	188	42,300	6,305	12,526	2,513	138,199	1.77	5.13	4.06	3.67	2.31	399.0
1994	348,140	270,858	160,967	48,922	26,501	201	36,618	8,900	13,273	2,807	137,222	1.54	4.96	3.84	2.74	2.42	417.1
1995	308,695	241,290	164,059	48,975	26,825	286	42,335	8,707	27,012	2,831	156,971	1.15	4.74	3.64	2.34	2.26	277.5
1996	280,439	250,767	179,943	54,344	29,543	378	42,213	4,087	27,119	3,601	161,285	1.39	4.47	3.38	2.10	1.83	348.6
1997	272,554	257,139	183,427	58,108	31,129	273	44,162	4,079	24,619	2,935	165,305	1.86	5.13	3.92	2.55	2.09	478.3
1998	297,503	277,340	201,416	56,843	30,955	636	45,501	5,945	27,466	2,788	170,134	1.73	5.57	4.35	3.00	2.11	479.8
1999	277,494	262,614	205,036	55,474	30,361	889	40,858	6,478	23,810	2,561	160,431	1.93	5.37	4.13	2.94	2.65	506.8
2000	281,170	269,285	225,958	55,626	31,282	848	39,378	10,544	24,670	2,674	165,023	3.28	6.20	4.92	3.93	4.02	883.3
2001	300,976	283,913	247,056	55,008	30,917	474	33,584	15,141	20,014	4,161	159,299	3.52	8.09	6.78	5.29	4.88	999.4
2002	293,030	274,739	247,561	59,398	33,501	482	26,879	15,439	21,697	5,984	163,379	1.99	6.39	5.20	3.91	4.47	546.7
2003	287,141	268,058	242,234	54,632	30,994	589	25,200	14,484	20,879	7,347	154,125	4.11	7.33	5.95	5.04	4.08	1,101.7
2004	293,838	277,969	251,841	60,527	31,156	661	26,674	9,423	19,172	8,278	155,891	5.24	8.12	6.75	5.90	5.49	1,456.6
2005	313,515	301,223	275,630	58,044	34,447	187	25,370	12,239	21,130	8,859	160,276	7.16	9.71	8.23	7.33	6.09	2,156.8
2006	356,378	348,040	318,680	60,017	34,051	204	29,076	28,953	24,080	11,156	187,537	5.70	11.02	9.61	8.02	6.90	1,983.8
2007	385,369	373,808	344,279	60,561	34,447	165	31,578	45,933	25,000	9,000	206,684	4.10	9.44	8.03	6.35	4.27	1,532.6
2008e	418,000	405,460	372,212	68,400	39,000	250	33,700	46,200	25,500	10,000	223,050	6.40	9.11	7.94	7.54	7.00	2,594.9

e = estimate
na = not available

Note: Prices and values are in nominal dollars

Source: Utah Geological Survey; Utah Division of Oil, Gas and Mining; U.S. Energy Information Administration

Table 91
Supply, Disposition, Price, and Value of Coal in Utah

	Supply		Distribution	Consumption by End Use					Exports		Prices		Value
Year	Production	Imports	Total Distribution of Utah Coal	Residential & Commercial	Coke Plants	Other Industrial	Electric Utilities	Total	To Other U.S. States	To Canada and/or Overseas	Mine mouth	End-Use Electric Utilities	Value of Utah Coal
	Thousand short tons		Thousand short tons	Thousand short tons					Thousand short tons		$/short ton		Million $
1980	13,236	1,214	13,014	237	1,473	501	4,895	7,106	5,078	776	$25.63	$26.06	$339.2
1981	13,808	1,136	14,550	196	1,477	804	4,956	7,433	5,292	3,472	26.87	28.99	371.0
1982	16,912	797	15,437	177	845	818	4,947	6,787	6,084	2,177	29.42	32.59	497.6
1983	11,829	937	12,157	191	831	627	5,223	6,872	4,787	1,346	28.32	30.96	335.0
1984	12,259	1,539	12,006	259	1,326	608	5,712	7,905	5,583	849	29.20	30.65	358.0
1985	12,831	1,580	14,384	252	1,254	472	6,325	8,303	5,924	625	27.69	32.34	355.3
1986	14,269	1,145	13,268	191	785	380	6,756	8,112	4,815	551	27.64	32.33	394.4
1987	16,521	1,165	16,989	124	0	507	11,175	11,806	5,078	555	25.67	29.09	424.1
1988	18,164	2,448	18,244	196	1,176	597	12,544	14,513	4,881	1,044	22.85	29.07	415.0
1989	20,517	2,367	20,289	231	1,178	686	12,949	15,044	5,108	2,175	22.01	28.46	451.6
1990	22,012	2,137	21,680	267	1,231	676	13,563	15,737	5,759	1,708	21.78	26.84	479.4
1991	21,875	2,007	21,673	305	1,192	508	12,829	14,834	5,842	2,112	21.56	27.33	471.6
1992	21,015	2,155	21,339	223	1,114	525	13,857	15,719	6,087	2,245	21.83	27.56	458.8
1993	21,723	2,100	21,935	121	1,005	727	14,210	16,063	6,194	2,567	21.17	27.15	459.9
1994	24,422	2,588	23,441	105	1,007	835	14,656	16,603	7,471	2,717	20.07	25.76	490.1
1995	25,051	1,841	25,443	77	990	915	13,693	15,675	9,037	3,811	19.11	24.93	478.7
1996	27,071	1,925	27,816	94	1,047	512	13,963	15,616	9,648	5,468	18.50	24.38	500.8
1997	26,428	2,615	25,407	123	1,020	709	14,654	16,506	7,862	3,513	18.34	24.93	484.7
1998	26,600	2,715	26,974	113	971	1,304	15,094	17,482	10,535	2,735	17.83	25.62	474.3
1999	26,491	2,159	26,180	114	741	744	15,011	16,610	9,514	2,567	17.36	23.62	459.9
2000	26,920	2,467	27,629	59	984	1,166	15,164	17,373	9,672	2,960	16.93	23.23	455.8
2001	27,024	2,676	26,798	60	806	1,235	14,906	16,748	10,728	2,404	17.76	25.55	479.9
2002	25,299	2,090	24,378	198	0	592	15,644	16,434	9,387	875	18.47	21.95	467.3
2003	23,069	2,036	23,699	61	0	611	16,302	16,974	9,546	222	16.64	23.10	383.9
2004	21,818	3,206	22,812	214	0	795	16,606	17,615	8,831	295	17.70	25.01	386.2
2005	24,556	2,786	24,740	45	0	800	16,484	17,329	9,271	212	19.34	24.52	474.9
2006	26,131	1,928	24,841	36	0	871	16,609	17,516	8,990	34	22.51	27.26	588.2
2007	24,288	1,496	24,532	32	0	870	16,613	17,515	8,521	173	25.18	30.60	611.6
2008e	24,000	2,220	23,576	30	0	895	16,850	17,775	8,069	500	26.87	31.30	644.9

e = estimate

Note: Prices and values are in nominal dollars

Source: Utah Geological Survey, U.S. Energy Information Administration

Table 92
Supply, Disposition, and Price of Electricity in Utah

	Net Generation by Fuel Type							Consumption by End Use					Prices by End Use			
Year	Coal	Petroleum	Natural Gas	Hydro	Geothermal	Other*	Total	Residential	Commercial	Industrial	Total	Consumption Per Capita	Residential	Commercial	Industrial	All Sectors
	Gigawatthours							Gigawatthours				GWh/1000 people	¢/kilowatthour			
1980	10,870	63	358	821	0	0	12,112	3,116	3,141	4,448	10,705	7.3	5.5	4.3	3.3	4.3
1981	10,869	40	230	623	0	0	11,762	3,436	2,999	5,451	11,886	7.8	6.0	5.0	3.7	4.7
1982	10,635	29	203	1,024	0	0	11,891	3,785	3,207	5,399	12,391	8.0	6.3	5.7	4.2	5.2
1983	10,921	40	69	1,394	0	0	12,424	3,804	3,350	6,040	13,194	8.3	6.9	6.3	4.4	5.6
1984	12,321	30	8	1,391	38	0	13,788	3,856	4,269	4,592	12,717	7.8	7.4	6.5	4.6	6.0
1985	14,229	40	14	1,019	109	0	15,411	3,985	4,596	4,458	13,039	7.9	7.8	6.9	5.0	6.4
1986	15,155	74	6	1,413	171	0	16,819	3,989	4,682	4,318	12,989	7.8	8.0	7.1	5.2	6.6
1987	25,221	92	13	893	127	0	26,346	3,980	4,863	4,555	13,398	8.0	8.0	7.1	4.9	6.5
1988	28,806	59	5	593	174	0	29,637	4,151	5,035	5,321	14,507	8.6	7.8	7.0	4.6	6.2
1989	29,676	48	37	562	173	0	30,496	4,163	5,173	5,629	14,965	8.8	7.4	6.7	4.1	5.8
1990	31,523	52	146	508	152	182	32,564	4,246	5,389	5,766	15,402	8.9	7.1	6.3	3.8	5.5
1991	28,888	51	550	627	186	204	30,506	4,460	5,571	5,876	15,907	8.9	7.1	6.1	3.9	5.5
1992	31,553	34	631	602	233	230	33,284	4,505	5,850	6,212	16,567	9.0	7.0	6.0	3.7	5.3
1993	32,126	37	606	860	187	281	34,097	4,726	5,920	6,221	16,867	8.9	6.9	6.0	3.8	5.3
1994	33,131	33	807	750	233	281	35,235	5,009	6,340	6,498	17,847	9.2	6.9	5.9	3.8	5.4
1995	30,611	36	791	969	168	261	32,836	5,041	6,462	6,957	18,460	9.3	6.9	5.9	3.7	5.3
1996	31,101	47	324	1,049	223	239	32,983	5,481	6,717	7,660	19,858	9.7	7.0	5.9	3.7	5.3
1997	32,544	47	328	1,344	204	281	34,748	5,661	7,285	7,430	20,376	9.7	6.9	5.7	3.5	5.2
1998	33,588	35	528	1,315	195	285	35,945	5,756	7,433	7,511	20,700	9.7	6.8	5.7	3.5	5.2
1999	34,534	31	610	1,255	186	199	36,815	6,236	8,075	7,568	21,879	10.0	6.3	5.3	3.4	4.9
2000	34,491	58	890	746	187	267	36,640	6,514	8,754	7,917	23,185	10.3	6.3	5.2	3.4	4.8
2001	33,679	58	1,446	508	185	10	35,886	6,693	9,113	7,411	23,217	10.1	6.7	5.6	3.5	5.2
2002	34,488	54	1,380	458	218	11	36,608	6,938	9,309	7,019	23,267	9.9	6.8	5.6	3.8	5.4
2003	35,979	33	1,383	421	198	9	38,024	7,166	9,048	7,646	23,860	9.9	6.9	5.6	3.8	5.4
2004	36,618	33	910	450	195	7	38,212	7,325	9,370	7,816	24,512	9.9	7.2	5.9	4.0	5.7
2005	35,970	41	1,178	784	185	7	38,165	7,567	9,444	7,989	25,000	9.8	7.5	6.1	4.2	5.9
2006	36,856	62	3,389	747	191	20	41,263	8,232	9,778	8,356	26,366	10.1	7.6	6.2	4.2	6.0
2007	37,251	69	5,551	638	164	18	43,691	8,689	10,305	8,755	27,749	10.3	8.2	6.5	4.5	6.4
2008e	37,700	60	7,400	780	200	220	46,360	8,670	10,320	9,130	28,120	10.1	8.3	6.6	4.6	6.5

e = estimate
*Includes landfill gas, municipal solid waste, and other manufactured and waste gases derived from fossil fuels

Note: Prices are in nominal dollars

Source: Utah Geological Survey, U.S. Energy Information Administration